

DATA SHEET

Pluggable Single-Pole SPD
ProTec T1 1+0
 Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TN-S, TN-C, TT (only L-N)
 Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N
 Surge Ratings: I_{imp} = up to 12.5kA (10/350 μ s)
 I_n = 20kA (8/20 μ s)
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012
 UL 1449 4th Edition

Technical Data

ProTec T1-xxx-1+0(-R)		75	150	300	350	480	750
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V	400V	600V
Maximum Continuous Operating Voltage (AC)	U_c	75V	150V	300V	350V	480V	750V
Nominal Discharge Current (8/20 μ s)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50kA	50kA	50kA	50kA	50kA	35kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5kA	12.5kA	12.5kA	12.5kA	10kA	5kA
Specific Energy	W/R	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	25 kJ/ Ω	6.25 kJ/ Ω
Charge	Q	6.25 As	6.25 As	6.25 As	6.25 As	5 As	2.5 As
Voltage Protection Level	U_p	700V	1000V	1500V	1750V	2100V	3200V
Response Time	t_A	< 25 ns					
Back-Up Fuse (max)		315 A / 250 A gG					250 A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA					50 kA
TOV Withstand 5s	U_T	114V	175V	337V	403V	581V	871V
TOV 120min	U_T	114V	229V	442V	529V	762V	1143V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					

UL Electrical							
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1200V	1500V	2500V
Nominal Discharge Current (8/20 μ s)	I_n	20kA	20kA	20kA	20kA	20kA	20kA
Short-Circuit Current Rating (AC)	SCCR	100kA	200kA	150kA	150kA	200kA	150kA

Mechanical & Environmental							
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]					
Permissible Operating Humidity	RH	5%...95%					
Altitude		13123 ft [4000 m]					
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)					
Mounting		35 mm DIN Rail, EN 60715					
Degree of Protection		IP 20 (built-in)					
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0					
Thermal Protection		Yes					
Operating State / Fault Indication		Green Flag / Not Green Flag					
Remote Contacts (RC)		Optional					
RC Switching Capacity		AC: 250V/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A					
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)					

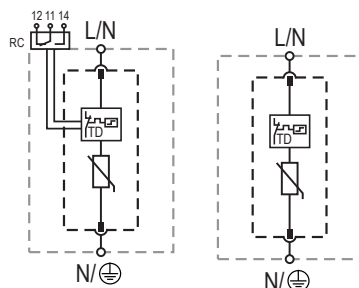
Order Code	75	150	300	350	480	750
ProTec T1-xxx-1+0	59.0007	59.0009	59.0011	59.0013	59.0015	59.0017
ProTec T1-xxx-1+0-R (with remote contacts)	59.0008	59.0010	59.0012	59.0014	59.0016	59.0018
ProTec T1-xxx-P	59.0001	59.0002	59.0003	59.0004	59.0005	59.0006

ProTec T1 1+0

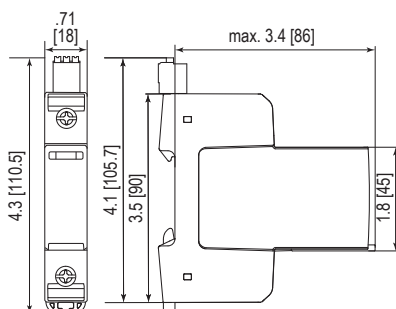
Internal Configuration

Legend

- L Terminal for Line Conductor
- N Terminal for Neutral Conductor
- ⊕ Terminal for PE/G Conductor
- RC Terminal for Remote Contacts (Optional)
- TD Thermal Disconnect



Dimensions & Packaging

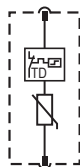


Dimensions & Packaging

		75	150	300	350	480	750	
ProTec T1-xxx-1+0	Single Unit Weight							
		pounds	.355	.355	.386	.422	.430	.437
		grams	161	161	175	191	195	198
ProTec T1-xxx-1+0-R	Single Unit Weight							
		pounds	.371	.371	.402	.437	.446	.452
		grams	168	168	182	198	202	205
Single Unit DIN 43880 Dimension		1 TE						
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]						
Minimum Order Quantity		12 Units						

Plug Internal Configuration

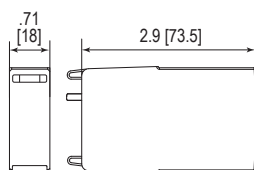
ProTec T1-xxx-P



Legend

- TD Thermal Disconnect

Dimensions & Packaging



Dimensions & Packaging

		75	150	300	350	480	750	
ProTec T1-xxx-P	Single Unit Weight							
		pounds	.206	.206	.236	.272	.280	.287
		grams	93	93	107	123	127	130
Single Unit DIN 43880 Dimension		1 TE						
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]						
Minimum Order Quantity		28 Units						

inches
[mm]

Information contained in this document is subject to change at any time without notice.

